Space Weather Forecast

Issued on Friday, 12 November 2021 at 12:19 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

Space Weather Forecast Headline: No significant activity.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar Activity was Very Low with no notable flares. There are currently three sunspot regions on the visible disc, including two small unipolar regions that have remained stable, although one is soon to rotate off the Earth-facing side. The second region is a small bipolar spot in the centre disc, but has also been dissipating. No Earth-directed coronal mass ejections (CMEs) were observed in available imagery.

Solar Wind / Geomagnetic Activity: The solar wind speed was generally at background, but had a brief enhancement to slightly elevated levels (450km/s) just before midnight, before easing to background again. The total magnetic field strength of the solar wind was weak, and whilst the north-south component was generally unremarkable, there was a brief period of weakly negative (southward pointed) field around, and shortly after midnight. Despite this, geomagnetic activity remained Quiet.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) remained at background with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Solar activity is expected to be generally Very Low with all three sunspots currently on the visible disc small and simple.

Solar Wind / Geomagnetic Activity: There are no Earth-directed CMEs. The solar wind speed is expected to mainly be at background, although brief enhancements are possible from arrival of slightly faster wind from a small coronal hole, most likely on day 2 (13th). Geomagnetic activity is expected to be mostly Quiet, with a chance of Unsettled (Kp 0-3), mainly day 2 (13th).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is forecast to stay at background with no solar radiation storms occurring.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	1	1	1	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	2	2	2	2
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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